Road Project STAGE 1 Submittal Checklist

(**Disclaimer**: This checklist is dynamic and not inclusive of all items. **The items in the checklist are guidelines. If there are any conflicts with this list and Chapter 14 of the Design Manual, the Design Manual will govern.** The designer is responsible for completeness and accuracy for all items included in the contract.)

I Grade Review Submittal or STAGE 1

► **ERMS Submittal for STAGE 1 should include the following;**

- ❑ Transmittal Letter
- ❑ Abbreviated Scope Report (Signed)
- ❑ Plans w/ Cross Sections
- ❑ Preliminary Draft Design Summary Report (to be used for the Hearing Section. No attachments required)
- ❑ Preliminary Design Computations
- ❑ Preliminary Quantity Calculations
- ❑ Preliminary Cost Estimate
- ❑ Scope/Environmental/Permit Form
- ❑ Quality Assurance Form
- ❑ Level 1 Design Criteria Checklist
- ❑ Identify Level 1, 2, 3 Design Exceptions (Official Design Exception submittal not required at this stage, but identification of all items required).

► **Level One & Two Conformance**

- ❑ Level One Conformance
  - ❑ Design Speed
  - ❑ Lane Width
  - ❑ Shoulder Width
  - ❑ Horizontal Curvature (Minimum Radius)
  - ❑ Superelevation Transition Lengths
  - ❑ Stopping Sight Distance Horizontal & Vertical Curves
  - ❑ Maximum Grades
  - ❑ Through Travel Lane Cross Slope
  - ❑ Superelevation Rate
  - ❑ Accessibility for Handicapped Individuals
- ❑ Level Two Conformance
  - ❑ Obstruction-free zone on 3R non-freeway projects
  - ❑ Guardrail length of need
  - ❑ Has correct runout length been used? (IDM Ch 49-5.0)
  - ❑ Has length of end treatment been considered in calculations? (Des Memo 05-12)
  - ❑ Have correct end treatments been used?
  - ❑ Has a graphical check been provided when guardrail falls within a curve? (NOTE: computer generated graphical checks are acceptable)
  - ❑ Have correct minimum length of rail been used?
  - ❑ Has the correct clear zone been used? (See IDM Ch 49-2.0)
  - ❑ Guardrail end treatment locations
  - ❑ Intersection Sight Distance (NOTE: computer generated graphical checks are acceptable)
  - ❑ Project length, including guardrail

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- **Abbreviated Engineer's Assessment**
  - ❑ Is the report included
  - ❑ Do it have signature approval

- **Level One Checklist and Design Computations**
  - ❑ Level One Checklist for each line – Verify correct criteria is being used (3R, 4R…)
  - ❑ Project length computations, including guard rail lengths and other contributing factors
  - ❑ Design computations for determining geometrics
  - ❑ Conceptual Maintenance of Traffic (Level One checklist not required)

- **Plan Sheets** (Note: Many of these Plan Sheet items were added to the review list because that's what designers are missing. This list will change periodically depending on consultant quality. The reviewer should not be spending a lot of time on these items.)
  - ❑ Index & Title Sheet
    - ❑ Project Numbers and Des Numbers
    - ❑ Project Location Map including North arrow & scales
    - ❑ Description of the project work type and location
    - ❑ Design Data including per IDM Section 14-3.04(06)
      - ❑ Design Speed
      - ❑ Project Design Criteria
      - ❑ Functional Classification
      - ❑ Terrain
      - ❑ Traffic Data (current, no more than 5 years old)
      - ❑ Urban or Rural
      - ❑ Access Control
    - ❑ Applicable Reference Point (N/A on LPA) (RP Number)
    - ❑ Signature block (but not filled in at this stage). If FHWA oversight is not required, then remove signature block for FHWA.
    - ❑ Gross and Net Project Lengths, not including incidental construction along S-lines.
    - ❑ Index of plan sheets
    - ❑ List of Utility owners and addresses
    - ❑ Bridge Structure information
    - ❑ Latitude and Longitude
    - ❑ Appropriate version of the Standard Specifications
  - ❑ Typical Cross Sections
    - ❑ Lane & Shoulder Widths
    - ❑ Profile Grade, construction centerline, paper relocation line and survey line locations
    - ❑ Basic design features including curbs, sidewalks, pavement and shoulder cross slopes, side slopes, ditches, etc.
    - ❑ Label Clear Zone (4R) or Obstruction Free Zone (3R)
  - ❑ Plan & Profile Sheets
    - ❑ Plotting of existing topography should be complete
    - ❑ Beginning and end of project
    - ❑ Horizontal alignment (e.g. horizontal curve data, PC, PI, PT, bearings)
    - ❑ Vertical alignment and its relationship to grade controlling features

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- ❑ Preliminary drainage design including mainline culverts, but not including ditch grades or storm sewers
- ❑ Preliminary public road approach and drive locations
- ❑ Alignment controlling features (example: structures, wetlands …)
- ❑ Are the Construction limits within the project scope of work?
- ❑ Proposed guardrail limits
- ❑ Survey Reference Ties and Benchmark Data should be complete

❑ Details
- ❑ Superelevation-transition diagrams

❑ Cross Sections
- ❑ Templates of the typical sections placed on the existing cross sections (Compare side slopes to what is shown on Typical Sections Sheet)
- ❑ Profile grade elevations
- ❑ Do the Mainline Drainage structures as shown on the cross sections have enough cover? Designer to provide structure size and invert elevations to determine cover requirements. (Pipe elevation could dictate profile)

► Additional Concerns
- ❑ Review Scope of Work: Are the plans consistent with the Abbreviated Engineering Assessment (Project Scope)? If there are any inconsistencies notify the INDOT Project Manager so the problem can be resolved
- ❑ Review plans in accordance with the latest Design Memorandums. (Note: anyone doing reviews must be familiar with all the latest Design Memorandums)
- ❑ Do the plans comply with any recent changes to the Design Manual? (Note: Now in effect, all design manual changes will show the date the revision is made in the section heading of the online manual. All designers and reviewers must use the online version of the design manual.)
- ❑ Do the plans comply with Hot Topics and Practice Pointers on Roadway Services web page?
- ❑ Complete Review Comment letter
- ❑ Complete Evaluation Form
- ❑ Hydraulics needs to be approved prior to Stage 1 for small structures and detention ponds.
- ❑ Bridge Hydraulics and Structure Size and Type needs to be approved before setting grade.
- ❑ Design Exceptions need to be submitted as soon as the design information becomes available. The submission of the Design Exception does not have to be associated with a normal submission (example: Stage 1 …).